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The Coleoptera Collected by the Katmai Expeditions

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THE COLEOPTERA COLLECTED BY THE KATMAI EXPEDITIONS

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This report on the Coleoptera collected by the Katmai Expeditions is based mainly upon the specimens secured by Prof. James S. Hine and his assistants. The collection in its entirety was referred to me by Professor Hine and all records not specifically credited elsewhere must be understood to be those of Professor Hine. Another and smaller collection, made by Mr. A. J. Basinger, another member of the expedition, was also placed at my disposal.

The majority of the specimens captured were taken within the Katmai region itself and are therefore not only characteristic of that territory but of the base of the Alaska Peninsula as a whole, a region which has never been definitely reported upon from the entomological standpoint. In view of this fact, I have thought it advisable to add to the report such notes as I have concerning other Coleoptera which have been secured in the same general region.

The specimens captured by the members of the expedition at other places than the Katmai region, were taken at the various stopping places in Alaska, while going or coming from the peninsula. Such localities are Kodiak on Kodiak Island, Excursion Inlet, Yakutat, Anchorage, Snug Harbor (Prince William Sound), and Cordova. A number of these have the same fauna as that found on the Alaska Peninsula, but others possess almost entirely the elements of the Vancouveran fauna,[1] as I have called it, that peculiar fauna characteristic of the heavily forested and humid belt along the coast of the Pacific Northwest. The localities in the Katmai region itself, where the majority of specimens were captured, are Savonoski and Brooks Falls, both on Naknek Lake and on the Bristol Bay or Bering Sea slope, Naknek on Bristol Bay, and Katmai on the Pacific side of the peninsula.

The fauna of the Alaska Peninsula, as deduced from a study of its Coleoptera, is made up of three elements: the Arctic, found along the north shore or Bristol Bay side and the greater portion of the interior of the peninsula to the westward of Naknek Lake;

[1] The Distribution of Insects in Western North America, by Edwin C. Van Dyke, Anns. Ent. Soc. Amer., Vol. XII (1919), p. 1-12.

the Hudsonian, at the base of the peninsula and extending about as far west as Naknek Lake, with here and there a portion intruding itself still farther westward; and the Vancouveran, which is to be found only along the immediate Pacific or southern shoreline.

Typical representatives of the Arctic fauna are such beetles as *Nebria bifaria* Mann. and *Nebria viridis* Horn; of the Hudsonian, *Notiophilus aquaticus* Linn., *Bembidium grapii* Gyll., *Tetropium cinnamopterum* Kirby, *Leptura sexmaculata* Linn., *Upis ceramboides* Linn., and *Polygraphus rufipennis* Kirby; and of the Vancouveran, *Scaphinotus marginatus* Fisch., *Nebria gregaris* Fisch., *Pterostichus validus* Dej., *Sphaerites glabratus* Fab., and *Leptalia macilenta* Mann.

Many of the northern species may be found in two faunal regions, while others such as *Silpha lapponica* Hbst. may be equally at home in three or more, for this species on our continent extends from the Arctic, through the Hudsonian and Vancouveran, even into the Sonoran. The faunal areas of the Alaska Peninsula as indicated above are in general in agreement with those found by Osgood[2] for the birds and plants.

For the privilege of studying this most interesting collection, I must thank Prof. J. S. Hine, as also Mr. A. J. Basinger for his kindness in submitting his specimens. I wish also to acknowledge my obligations to Dr. A. Fenyes, who very kindly named for me, as far as possible, all of the specimens of the Aleocharinæ, that most difficult subfamily of Staphylinidæ; and to Dr. J. M. Swaine of Ottawa, for his assistance in determining a number of the Scolytidæ.

FAMILY CARABIDÆ

Scaphinotus marginatus Fisch. Ent. Russ I (1820-1822), p. 79. t 7, f 1.

One specimen from Kodiak, Sept., 1917. Numerous specimens from Mount Pavlof on the Alaska Peninsula have likewise been seen. It is also found on Atka, Unalaska, Akutan, and Kadiak Islands, and on the mainland extends down the coast through southeastern Alaska and with modifications throughout the western portions of British Columbia, Washington, and northwestern Oregon.

Carabus chamissonis Fisch. Ent. Russ. I (1820-1822), p. 88. t 7, f 12.

Not found by the expedition though taken previously by others at Koggiung on Bristol Bay and near Mount Pavlof. It is also found on Unalaska and ex-

[2] A Biological Reconnaissance of the Base of the Alaska Peninsula, by Wilfred H. Osgood, North Am. Fauna No. 24, Biol. Survey, U. S. Dept. of Agr., 1904.

tends throughout boreal America from Nome to Greenland and Labrador, and occurs as a relict on Mount Washington, N. H.

Carabus tædatus Fab. Syst. El. I (1801), p. 174.

One specimen taken at Katmai, July, 1917. It is also known from near Mount Pavlof as well as from Unalaska and Kadiak Islands and the entire west coast as far south as middle Washington, and in modified form from the territory east of this to the Lake Superior region, down the Rocky Mountains to Arizona, and through the Cascades and Sierra Nevada Mountains to Lake Tahoe, California.

Elaphrus riparius Linn. Faun. Suec. nr. (1761), p. 749.

Twelve specimens from Savonoski, Aug. 12, 1919. Many others also in Basinger collection. These are all of the more typical phase such as are found throughout the Pacific Northwest generally and which likewise simulate the European form. This record is the most western for the species. The species in its various phases extends from Rampart, Alaska, to Maine, Vermont, and the Great Lakes, through the Rocky Mountains to New Mexico, and throughout the Pacific coast to southern California. In the Old World, it occurs in northern Europe and Asia.

Elaphrus pallipes Horn. Trans. Am. Ent. Soc. VII (1878), p. 51.

Four specimens from Katmai, June, 1917. These are darker, almost black, more opaque, and with the callosities less evident than in the more typical forms which are to be found farther to the south. This is the most northern record, the first, I believe, from Alaska. It has previously been taken only in the western parts of British Columbia, Washington, and Oregon, and northwestern California.

Diachila subpolaris Lec. New Spec. I, Smith Miss. Coll. (1863-66), p. 2.

Not taken by the expedition, though collected previously near Mount Pavlof. It has also been taken on the Kenai Peninsula, at Nome, and in the Hudson Bay region.

Lorocera pilicornis Fab. Syst. Ent. (1792), p. 243.

Five specimens, four from Katmai, June, 1917 and 1919, and one from Brooks Falls, July, 1919. This is the typical form as we know it in this country, where it is generally but incorrectly listed as *cærulescens*. This species extends from boreal America to Vermont, and in a modified form down the Rocky Mountains to New Mexico and through the Sierra Nevada Mountains to Lake Tahoe, Cal. The variety *congesta* Mann. has been found on the Kenai Peninsula, the type locality, and by myself on Unalaska Island. The true species is also found throughout Europe and northern Siberia.

Notiophilus aquaticus Linn. Faun. Suec., nr. (1761), p. 752.

One specimen from Brooks Falls, July, 1919. This species has also been found on Unalaska Island and its area of distribution extends from the interior of Alaska to Labrador and Newfoundland, south to New Hampshire and

Massachusetts, the Lake States, and through the Rocky Mountains to Colorado. It does not occur on the Pacific coast south of Alaska. It is also found in northern Europe and Siberia.

Nebria gregaris Fisch. Ent. Russ. I (1820-1822), p. 72, t 6, f 2.

Three specimens from Kodiak, Sept. 21, 1919. These specimens differ from the majority of the Unalaska specimens only in having the humeri a bit more prominent and the elytral striæ more evidently punctured. This species is a typical seacoast species and in its true form with an elongate body, well-rounded humeri, and poorly developed wings, is never found far from the seashore. Besides the two localities mentioned, it has also been taken at Yakutat and Sitka and is no doubt generally distributed along the seacoast of the Pacific side of Alaska.

Nebria metallica Fisch. Ent. Russ. I (1820-1822), p. 71, t 6, f 1.

Eleven specimens, five from Katmai, July, 1917, and the rest from Savonoski, June, 1919. These are all of a deep metallic purple color and otherwise like typical specimens. This beetle is found both near the seacoast and in the interior, but always near the margins of streams. It has a wide distribution, having been found on the islands of Atka, Unalaska, Akutan, Kadiak, and Afognak, as well as on the Kenai Peninsula, at Sitka, the Queen Charlotte Islands, Glenora, B. C., Monroe, Wash., and among the Bitter Root Mountains of Montana.

Nebria bifaria Mann. Bull. Mosc. XXVI (1853), p. 128.

A large series of specimens and from the following localities: Savonoski, July and Aug., 1919; Brooks Falls, July, 1919; and Katmai, July, 1917. A few of the specimens from the two interior localities have the rufous thighs and black tibia like the specimens from the type locality, the Pribilof islands, and from Nome, but the rest are entirely black and similar in this regard to several which I have seen from the Mackenzie Delta.[3]

In the majority, the prothorax also has the sides evidently sinuate posteriorly and the hind angles almost right, while in the others the sides are quite straight and obliquely convergent backwards and with obtuse hind angles, as in typical specimens. As regards the elytra, there is also shown a great degree of variation, most having the striæ and foveæ well impressed and the intervals quite convex, while a few, chiefly the larger specimens, are more or less atypical, with the intervals fairly flat and the foveæ reduced both in size and numbers. The tendency for individuals among arctic species to be either with or without red legs is quite common. Rufenism as regards other portions of the body is also frequent.

Besides the localities mentioned above, this species has been reported from Kamchatka and the northeastern coast of Siberia.

Nebria viridis Horn. Trans. Am. Ent. Soc. III (1870), p. 101.

Not taken by the expedition. Numerous specimens have been seen, however, from near Mount Pavlof. The name of this species is a very unfortunate one.

[3] Report Canad. Arctic Exped. Vol. III, Insects (1919), p. 14 E.

The original description was based upon very immature and not thoroughly pigmented specimens. These are quite greenish. The more mature are quite bronzed and with but a trace of the greenish luster, while some of the older individuals are very black. I have a series from the type locality which shows all degrees of color, certain forms agreeing perfectly with the type with which I have carefully compared them.

Sahlberg's *N. parvula*,[4] from the American coast of Bering Sea, is undoubtedly one of these darker forms of *viridis* and hence a synonym, and I believe that Colonel Casey's *N. reducta*[5] founded upon a specimen supposedly from St. Paul Island, Pribilof Islands, is also another. This is the shortest species which we have on our continent and as far as I know is only positively known in this country from the Seward Peninsula and Mount Pavlof on the Alaska Peninsula.

Nebria sahlbergi Fisch. Ent. Russ. III (1825-1828), p. 254, t 14, f 2.

Two specimens from Katmai, July, 1917. One of these agrees perfectly with specimens from the west coast which are generally considered typical, while the other has the sides of prothorax near the hind angles less sinuate and consequently less parallel. This is the most northern positive record that I know of for the species. This species in its typical phase has been taken in the following localities; Kenai Peninsula, Sitka, Glenora, B. C., Queen Charlotte Islands, Vancouver, B. C., the Olympic Mountains, Mount Rainier and adjacent Cascade Mountains of Washington, and in modified form extends across Canada to the Lake Superior region and Mount Washington, N. H., and down the Rocky Mountains to Colorado. The Labrador specimens formerly placed with it have been quite correctly separated as a distinct species, *N. labradorica* Csy.

Nebria aleuta n. sp.

Below the average in size and rather delicately formed; nigropiceous, the antennæ, palpi, legs and two vague spots between the eyes rufous. Head four-fifths as broad as prothorax; eyes moderately prominent; antennæ rather delicate and reaching beyond the middle of elytra. Prothorax slightly more than three-fifths as long as broad and five-sevenths as broad as elytra, apex deeply emarginate, the margin bisinuate, sides broadly rounded anteriorly, sinuate posteriorly and almost parallel just in front of base, the hind angles acute and slightly divergent outwardly, the lateral margin of moderate width and evenly reflexed, the sulcus within rather deep and rugose, the base biemarginate, the disc with longitudinal line well impressed, the anterior transverse impression distinctly but not sharply defined, the posterior transverse more broadly and deeply so and distinctly punctured, the basal impressions rather broad though sharply defined. Elytra four times as long as prothorax, the humeri subprominent and rounded, the sides almost straight, barely arcuate, and gradually divergent backwards, the margin fine, the disc slightly convex, the striæ finely impressed, more deeply anteriorly and

[4] Coleoptera och Hemiptera insalade af Vega-Expeditionens Medlemmer a Berings Sund, Amerikanska Kust, Stockholm, Bd. IV (1885), p. 47.

[5] Memoirs of Coleoptera, IX (1920), p. 150, by Thomas L. Casey.

very finely punctured except near apex, the intervals flat, a series of five shallow foveæ along third striæ. The true wings more than 1 mm. longer than the elytra, with veins distinct, the membrane brownish near veins but hyaline elsewhere. Legs delicate. Length of male 9 mm., breadth 3 mm. The females average larger, length 11 mm. by 3.5 mm. broad.

Type male and several paratypes in my collection. Paratypes deposited in U. S. National Museum, California Academy of Sciences, and University of Ohio. Type locality, Mount Makushin, Unalaska Island, Alaska, July 3, 1907, the specimens all collected by myself. A series of over fifty specimens was used for comparison.

This species is very close to *N. gregaria* Fisch., differing from that by being generally smaller, less elongate, the prothorax with the sides more suddenly constricted posteriorly and the basal impressions better defined, the elytra with better defined humeri, sides more parallel and general shape less spatulate, and by having the antennæ and legs always rufous and the elytra rarely with the metallic green or blue sheen which is so evident in the other. The true wings are also better developed than they are in *gregaria*. It also approaches *N. sahlbergi* Fisch., particularly those phases with reddish legs, but on comparison is found to have the elytra shorter, the striæ less evidently punctured, and so forth.

This is the species which has been considered for sometime as *N. carbonaria* Esch. but differs greatly from that. In the Le Conte collection, there is a specimen of *carbonaria,* from Kamchatka, the type locality, received, I believe, from Mannerheim. This does not in the least resemble *aleuta*. The true *carbonaria* does not occur in the Aleutian Islands nor elsewhere in North America and should be dropped from our lists. *Aleuta* is found only in the interior and generally on the uplands of Unalaska Island, where it is very abundant under rocks just below the melting snow of the snow fields. It was also found on Akutan Island.

In the material from the Alaska Peninsula collected by Professor Hine are over twenty specimens of what I consider to be *aleuta*. They were taken at Katmai, June and July, 1917, Kodiak, Sept. 21, 1919, and Savonoski, June, 1919.

Pelophila eschscholtzii Mann. Hummel, Essais Entom. III (1823), p. 40-4. Bull. Mosc. XVI (1843), p. 20.

Ten specimens, eight from Kodiak, June and Sept., 1917, and Sept. 18, 1919; one from Savonoski, Aug. 1, 1919, and one from Katmai, June, 1917. The Kodiak specimens are large and similar in structure to the typical forms from Unalaska. The Savonoski and Katmai individuals are somewhat smaller, though equally well sculptured, but with legs more or less rufous. This species is very variable, not only as regards size and color, but also as to sculpture. Some specimens, like those from Atka Island, are entirely castaneous, while others, like the more inland and arctic mainland forms, may have not only red legs but be much smaller and smoother, with the intervals less elevated and the striæ less punctured. The species has been taken not only at the localities given above but on the Seward Peninsula and in the Yukon valley.

Bembidium carinula Chaud. Rev. et Mag. Zool. (1868), Ser. 2, XX, p. 239.

Eight specimens from Toms Village, July, 1919. These are typical and this is the most northwesterly record that I know of for the species. It is generally distributed throughout the more boreal parts of North America, being particularly common in the Great Lakes region.

Bembidium planiusculum Mann. Bull. Mosc. XVI (1843), p. 215.

One specimen from Brooks Falls. This has the elytra slightly rufescent, like most of the specimens from the more northern localities. It has a distribution extending from Alaska south through the Rocky Mountains and along the Pacific coast to middle California.

Bembidium complanulum Mann. Bull. Mosc. XXVI (1853), p. 152.

A large series of specimens, with representatives from Savonoski, Brooks Falls, Katmai, Kodiak, and Excursion Inlet, and showing considerable variation as would be expected, both as regards size and sculpture. This species is very common along the Pacific coast from Alaska to middle California and throughout the Rocky Mountains. It particularly favors the wet slopes bordering the melting ice fields.

Bembidium funereum Lec. Proc. Acad. Phil. (1860), p. 320.

A good series of specimens, all from Savonoski or Katmai. Most of these are of the usual size and more or less brownish, as in typical specimens, but several are of much larger size and are more heavily pigmented. This species ranges along the coast from Alaska to California and in the north extends inland to Saskatchewan and Manitoba.

Bembidium incertum Mots. Bull. Mosc. XVIII (1845), p. 350.

Nine specimens, one from Savonoski, the others from Kodiak. These are all rather small and compactly built, much smaller than the majority of the specimens found farther south. The species is one of the most variable of the genus and one of the most characteristic of the mountains of the West. I have taken it on the uplands of Unalaska, in the Canadian Rockies, the Cascades and high Sierra Nevadas, and as a rule near the ice fields or glacial rills. It is also known to occur from Alaska to Michigan and through the Rocky Mountains to Colorado.

Bembidium lucidum Lec. Anns. Lyc. Nat. Hist. N. Y. IV (1848), p. 466.

Twelve specimens from Savonoski. I have other specimens from Rampart, and other places in the interior of Alaska. It ranges from there to the Great Lakes and throughout the greater part of the region west of the Rocky Mountains.

Bembidium grapii Gyll. Ins. Suec., IV (1827), p. 403.

A good series with representatives from both Savonoski and Brooks Falls. This is one of the most typically boreal species of the genus. It is known to me from Unalaska Island, from Kodiak, the Kenai Peninsula, the interior of Alaska, and ranges throughout the Hudson Bay region to Labrador, to the higher mountains of New Hampshire and New York, throughout the

entire Rocky Mountains, and down the Cascades and Sierra Nevada Mountains to Lake Tahoe. It also occurs in northern Europe and Siberia as well as in Greenland.

Bembidium convexulum Hayd. Trans. Am. Ent. Soc. XXIV (1897), p. 106.

One specimen from Brooks Falls. A rare species, known previously only from eastern British Columbia and Alberta.

Bembidium oblongulum Mann. Bull. Mosc. XXV (1852), p. 299.

Two specimens from Yakutat, May 31, 1919. It is known to me also from the following localities: Kenai Peninsula, Sitka, the Queen Charlotte Islands, the high middle and southern Sierras of California, Massachusetts, the mountains of northern New Hampshire and New York, and the Black Mountains of North Carolina.

Patrobus septentrionis Dej. Spec. Gen. III (1828), p. 29.

One specimen from Kodiak. This is a species of wide distribution and of many weak races. It is found on the Pribilof Islands, Atka, Unalaska, and Afognak, and extends generally from the Seward Peninsula to Labrador and the Lake Superior region, along the Rocky Mountains to Colorado, the Cascades and Sierra Nevadas to Lake Tahoe, and along the lowlands of the west coast to middle Washington. In the Old World, it occurs throughout the arctic portions of both Europe and Asia.

Trechus chalybeus Dej. Spec. Gen. V (1831), p. 17.

A good series of specimens, one from Yakutat, the remainder from Katmai. This species ranges over a great deal of the more boreal parts of America and breaks up into a number of minor races. It is found on Unalaska Island, all of the islands to the eastward, and on the mainland extends from the Seward Peninsula to Labrador and Newfoundland, to Massachusetts and New Jersey to the Great Lakes, down the Rocky Mountains to Colorado, down the Cascades and Sierra Nevada Mountains to near Mount Whitney, and along the coast lowlands of the Pacific to Crescent City, Cal.

Pterostichus validus Dej. Spec. Gen. III (1828), p. 325.

Two specimens from Kodiak. This is a common species of the Pacific coast, extending from southeastern Alaska to the southern part of Oregon.

Pterostichus castaneus Dej. Spec. Gen. III (1828), p. 326.

A small series, all from Excursion Inlet. This insect is generally distributed along the coast from southeastern Alaska to northern Washington and along the Cascades to Mount Jefferson, Ore., and into the mountains of Idaho. In the heavily timbered lowlands it is generally found beneath the bark of rotting logs, but on the uplands it may be found under rocks as well as dead timber.

Pterostichus agonus Horn. Trans. Am. Ent. Soc. VIII (1880), p. 140.

Not taken by the expedition. I, however, possess a specimen from Ugashik on Bristol Bay. It ranges from the Seward Peninsula to Labrador, the Hudson Bay region and to Lake Louise, Alberta. A great deal of variation

is observable, particularly as to color, for this varies from brilliant green through bronze to black. The green specimens closely simulate *Amara hæmotopus* Dej.

Pterostichus adstrictus Esch. Mem. Soc. Imp. Nat. Mosc. VI (1823), p. 103. 8.

A very large series containing representatives from Kodiak, Anchorage, Excursion Inlet, Katmai, Savonoski, and Brooks Falls. In this series, there is to be observed a great deal of minor variation, as would be expected with this species, but as a whole it agrees thoroughly with the specimens from Unalaska, the type locality.

This species has been generally listed as *P. orinomum* Kirby in our catalogues, but that name was proposed much later than the preceding. *P. luczotii* Dej. is also but a race or subspecies of the preceding, differing only in having the prothorax less depressed towards the posterior angles. Large series, and I have seen thousands, show that they grade from one into the other. Many other so-called species erected at the expense of this species are likewise worthless.

This species as a whole is widely distributed and extends along the Pacific lowlands from Alaska to northern California, along the Cascades and Sierra Nevadas, down the Rocky Mountains, and across the continent to Labrador, Newfoundland, the mountains of New York, and the Great Lakes. The subspecies *luczotii* is the form generally to be found in the eastern part of the country and the typical form in the West.

Pterostichus fatuus Mann. Bull. Mosc. XXVI (1853), p. 130.

A small series from Kodiak, July, 1917, and one specimen somewhat smaller, from Valdez, June 4, 1919. The Kodiak specimens are from the type locality and agree fully with the original description, especially as regards the pronotum being evidently bistriate posteriorly, "postice utrique evidenter bistriato."

Le Conte[6] was wrong in his interpretation of this species. The specimen in his collection labeled *fatuus* is in reality a phase nearer *pinguedineus* Esch. and his tables, based upon the same, are consequently incorrect. As a matter of fact, *fatuus* grades gradually into *pinguedineus* on one side and *riparius* Dej. on the other, being with difficulty separated from the latter. *Fatuus* I have seen in typical form only from Kodiak and the adjacent Kenai Peninsula, whereas specimens of *pinguedineus* are known to me from Unalaska Island, the type locality, as well as from Nome and other places on the Seward Peninsula.

Pterostichus hudsonicus Lec. Proc. Acad. Nat. Sci. Phil. (1872), p. 315.

Two specimens from Katmai, June, 1917, both fairly typical. This species is not found on the Aleutian Islands, but it lives on the Pribilof Islands and on the mainland ranges from the Seward Peninsula to Labrador, Mount Washington, N. H., and the Lake Superior region.

[6] Proc. Acad. Nat. Sci. Phil. (1873), p. 310, and reprint in Bull. Brooklyn Ent. Soc. V (1882), p. 40.

Pterostichus empetricola Dej. Spec. Gen. III (1828), p. 331.

A good series of specimens with representatives from Kodiak, Katmai, Savonoski, and Brooks Falls. The specimens from Kodiak are the most like the typical form from Unalaska, having the prothorax broad and the sides well rounded. Most of the others are larger, more elongate, and with a narrower prothorax. There is, in fact, a very great degree of variation, as there is with all of the other members of the subgenus *Cryobius,* but I think that without doubt they are all variants of one very plastic species.

Pterostichus mandibularis Kirby. Rich. Fauna Bor. Amer. IV (1837), p. 31.

Three specimens, all from Katmai, June, 1917, have been referred to this species, only one of which is at all typical. This species is also found on the Kenai Peninsula and is generally distributed throughout arctic America, extending as far south as Mount Washington, N. H., and the Lake Superior region. It is also recorded as from Siberia.

Amara hudsonica Hayward. Trans. Am. Ent. Soc. XXXIV (1908), p. 29.

Three specimens in my own collection were taken at Koggiung on Bristol Bay, during the summer of 1912. It has been reported previously only from Ungava Bay, Hudson Bay Territory.

Amara hæmatopus Dej. Spec. Gen. V (1831), p. 769. Similis Kirby, Rich. Fauna Bor. Amer. IV (1837), p. 34.

One specimen taken at Katmai, July, 1917. This species ranges in general from the Seward Peninsula, through the Hudson Bay region to Labrador, the Great Lakes, and Mount Washington, N. H.

Amara littoralis Mann. Bull. Mosc. XVI (1843), p. 207.

Two specimens from Kodiak, Sept., 1919. This species as defined is restricted to southeastern Alaska. It can hardly be separated, except by the locality labels, from *A. impuncticollis* Say, which replaces it along the coast from British Columbia to California and across the continent to the Atlantic seaboard.

Amara interstitialis Dej. Spec. Gen. III (1828), p. 472.

One rather atypical specimen from Brooks Falls, June, 1919. I, however, possess a typical specimen from Koggiung on Bristol Bay. This is a very abundant species in the north and extends from Alaska south to the Canadian line and through both the Appalachian and Rocky Mountains. It is a very variable species also as to color, ranging from a brilliant green through bronze to black.

Amara erratica Sturm. Deutsch. Fauna VI (1825), p. 55.

I have seen but one specimen of this, from Koggiung on Bristol Bay. It is, however, a very common boreal species, ranging throughout the northern parts of our continent, as well as down into the Rocky Mountains, and through the Cascades and high Sierra Nevadas to Mount Whitney. It is also found in northern Europe and Siberia.

Calathus ingratus Dej. Spec. Gen. III (1828), p. 77.

One specimen from Katmai. It is found also on Unalaska and Afognak Islands, and on the mainland extends from the Kenai Peninsula to northern British Columbia, through the Rocky Mountains, and to the Great Lakes and Labrador.

Calathus advena Lec. Anns. Lyc. Nat. Hist. N. Y. IV (1848), p. 217.

C. mollis Esch., Mem. Soc. Imp. Nat. Mosc. VI (1823), p. 102.
C. lenis Mann., Bull. Mosc. XXVI (1853), p. 140.
C. dulcis Mann., Bull. Mosc. XXVI (1853), p. 141.

Many specimens with representatives of two phases. The majority are of the larger, broader phase, described as *lenis* Mann., and were all taken at Kodiak, the type locality for this phase. They are, however, not perceptibly different from those described as *mollis* Esch., from Unalaska Island. The remainder are from Savonoski and are smaller and generally narrower, answering to *dulcis* Mann., described from the adjacent Kenai Peninsula.

The subgenus *Pristodactyla,* to which this species belongs, is but weakly separated from typical *Calathus,* and is linked up besides by intermediate forms. This being the case, I prefer to consider it as but a subgenus, not as a genus, as has been done by Leng in his recently published catalogue. In fact, if we acknowledge this genus, we would have to call the species *mollis* Esch., for this name, proposed in 1823, was only suppressed because it had been previously used by T. Marshal in 1802 for an English species and a member of the more typical portion of the genus *Calathus.*

Of the species *advena,* there are three fairly well-marked phases or subspecies. The largest and broadest might be calld the var. *lenis* Mann. This is common on Atka and Unalaska Islands, the Alaska Peninsula as indicated above, and has also been found by myself on Mount Rainier, Wash. The intermediate phase is *advena* Lec. itself, found in the Lake Superior region, in Maine, and throughout the Rocky Mountains, probably also over a great part of the Hudson Bay region. The third phase, *dulcis* Mann., I know of only from the Kenai Peninsula and from the base of the Alaska Peninsula, Savonoski.

Platynus bicolor Dej. Spec Gen. III (1828), p. 126.

A moderate series, all from Savonoski, June and Aug., 1919. This fairly stable species appears to be quite common in the region, though it is rare in collections. It has been reported also from Fort Simpson, Mackenzie River, Mount Washington, N. H., and from California. The last record, I doubt. In the Old World, it occurs throughout most of Siberia.

Platynus erasus Lec. Bull. Brooklyn Ent. Soc. II (Oct. 1879), p. 52.

Four fairly typical specimens from Katmai and Brooks Falls. This insect was described from Vancouver Island and later reported from Alaska. I have found it common at Banff, Alberta, various places in Washington (State), and at Lake Tahoe, Cal.

Platynus bembidioides Kirby. Rich. Fauna Bor. Amer. IV (1837), p. 15.

One specimen from Savonoski, July, 1919. This interesting pock-marked species ranges throughout the greater part of boreal America and as far south as the State of Washington and the Great Lakes region.

Trichocellus cognatus Gyll. Insect. Suec. descript. IV (1827), p. 455.

Two specimens from Brooks Falls, July, 1919, one secured by Mr. Basinger. This is a widely distributed species, being found throughout the more boreal parts of North America as well as along the entire west coast. It is also found in northern Europe and Asia. It is quite plastic, having numerous phases or races, many of which are more or less restricted to definite territories. Some of these have unfortunately been given specific standing by certain authors.

Tachycellus nigrinus Dej. Spec. Gen. IV (1829), p. 399.

One specimen from Excursion Inlet, May 31, 1919. This species is found along the Pacific coast from Alaska to San Francisco and across the continent to Newfoundland, the Great Lakes, and through the Rocky Mountains to New Mexico.

FAMILY DYTISCIDÆ

Cœlambus hudsonicus Fall. North Amer. Spec. Cœlambus (1919), p. 18.

Four specimens collected by Mr. Basinger at Naknek on Bristol Bay, June 18, 1919. This was reported by Fall only from Hudson Bay.

Deronectes griseostriatus DeG. Mém. pour servir l'hist. Insect. IV (1774), p. 103.

Many specimens from Kodiak, Katmai, and Ukak. It is found also on Unalaska and extends across the continent to Labrador and Pennsylvania, through the Rocky Mountains to Colorado, through the entire Cascades and Sierra Nevadas, and down the Pacific coast to San Francisco. It is found also in arctic Europe and Siberia.

Hydroporus tartaricus Lec. Agassiz Lake Superior (1850), p. 214.

H. nigrellus Mann., Bull. Mosc. XXVI (1853), p. 163.

A small series of specimens from Brooks Falls and Savonoski, July, 1919. This small and very black species is widely distributed, being found commonly farther west on the peninsula as well as on the Kenai Peninsula and extends to the Queen Charlotte Islands, through the Hudson Bay region to Lake Superior and through the high Rocky Mountains. It is also found in northern Europe and arctic Siberia.

Hydroporus longiusculus Gemm. & Har., Cat. Col. II (1868), p. 436.

H. oblongus Aubé, Spec. Gen. (1836), p. 605.

Two specimens from Katmai. This is the commonest small water beetle on Unalaska. Its general distribution both in the Old and New Worlds is the same as for the preceding species.

Hydroporus signatus Mann. Bull. Mosc. XXVI (1853), p. 161.

Eight specimens from Kodiak, June, 1917. It is found also near Mount Pavlof, Alaska Peninsula, and extends eastward to eastern Canada, New York, and Illinois.

Hydroporus terminalis Sharp. Sci. Trans. Roy. Dublin Soc. 2 II (1882), p. 484.

One specimen from Kodiak, June, 1917, which I cannot separate from typical specimens from California.

Hydroporus lapponum. Gyll. Ins. Suec. I (1808), p. 532.

H. truncatus Mann., Bull. Mosc. XXVI (1853), p. 162.

Three specimens from Savonoski, Aug., 1919. It is reported also from the Kenai Peninsula and is quite common on the Seward Peninsula. It occurs also in northern Europe and Siberia.

Agabus hypomelas Mann. Bull. Mosc. XVI (1843), p. 97.

Two specimens from Katmai, June, 1917. This is a common insect in the north. It is found on the Pribilof Islands, on Unalaska, Kodiak, the Kenai Peninsula, at Sitka, and extends as far south as Vancouver Island.

Agabus semipunctatus Kirby. Rich. Fauna Bor. Amer. IV (1837), p. 69.

Several specimens from Katmai, June, 1917. This species also occurs on the Kenai Peninsula and extends from there to the Great Lakes and Missouri.

Agabus congener Payk. Fauna Suec. I (1798), p. 214.

One specimen from Katmai, Aug., 1917. It is found also on Atka and Unalaska Islands, in Labrador and New Hampshire, and in the north of Europe and Siberia.

Agabus infuscatus Aubé. Spec. Gen. VI (1838), p. 330.

Two specimens, one from Savonoski, Aug., 1919, the other collected by Mr. Basinger at Brooks Falls, July 8, 1919. Other specimens have been seen from Pirate Cove, a locality farther west on the peninsula. It is also found in Labrador.

Agabus anthracinus Mann.. Bull Mosc. XXV (1852), p. 304.

Three specimens from Kodiak, June, 1917. It was also found at Brooks Falls, July 8, 1919, by Mr. Basinger and is known from the Kenai Peninsula, Sitka, the Hudson Bay region, and eastern Canada.

Agabus arcticus Payk. Faun. Suec. I (1798), p. 201.

Specimens were taken only by Mr. Basinger, at Naknek on Bristol Bay, June 18, 1919, and at Brooks Falls, June 8, 1919. It occurs also in Labrador and in boreal Europe and Siberia.

Agabus tristis Aubé. Spec. Gen. VI (1838), p. 356.

A small series of the more typical dark phase from Kodiak, June, 1917. A number of specimens of the lighter phase were taken by Mr. Basinger at Naknek on Bristol Bay, June 18, 1919. This species is common and char-

acteristic of the more boreal parts of the country as well as of the high altitudes, farther south. It is generally to be found along the lake margins. It has been reported from Atka, Unalaska, the Kenai Peninsula, and Sitka, and ranges across the country to Labrador and the Great Lakes, through the Rocky Mountains to New Mexico and through the Cascades and Sierra Nevadas. It is recorded also from arctic Siberia.

Ilybius 4-maculatus Aubé. Spec. Gen. VI (1838), p. 274.

Several specimens from Katmai, July, 1917, and Savonoski, 1919. It is a common species in the shallow pools of the north, having been reported from Atka, Unalaska, Sitka, Kodiak, and from as far south as Oregon.

Ilybius angustior Gyll. Insect. Suec. I (1808), p. 500.

A number of specimens from Brooks Falls, July 8, 1919, collected by Mr. Basinger. This species has also been taken on the Kenai Peninsula and ranges across the continent to Labrador, the Great Lakes, and Kansas. It occurs also in northern Europe and Siberia. The specimens examined were all somewhat smaller than those seen from Labrador.

Rhantus divisus Aubé. Spec. Gen. VI (1838), p. 248.

Several specimens from Kodiak, June, 1917 and Sept., 1919, and Savonoski, Aug. 1919. It is found also on the Kenai Peninsula, at Sitka, and in Oregon, California, and Colorado.

Colymbetes dolobratus Payk. Fauna Suec. I (1798), p. 204.

Several specimens from Kodiak, June, 1917, and Katmai, June, 1917. This species is common in the shallow upland pools of both Atka and Unalaska, and is also known from near Nome, as well as from the Kenai Peninsula, Hudson Bay region, and northern Europe and Siberia.

Dytiscus vexatus Sharp. Sci. Trans. Roy. Dublin Soc. 2 II (1882), p. 643.

One specimen, a female, from Kodiak, June, 1917. This species is also found quite commonly at Unalaska and is no doubt widely distributed on the mainland. It has been much confused in the past with *D. dauricus* Gebl. and no doubt many localities have been cited for the latter which belong to it.

FAMILY GYRINIDÆ

Gyrinus minutus Fab. Syst. Eleuth. (1801), p. 276.

Two specimens from Savonoski, one collected by Mr. Basinger. It ranges across the continent to the Great Lakes and along the Atlantic coast to Florida, but on the Pacific side, goes no farther south than British Columbia. It occurs also in northern Europe and Siberia.

Gyrinus picipes Aubé. Spec. Gen. VI (1838), p. 694.

Many specimens from Kodiak, Sept., 1917, and Sept., 1919, and some few from Katmai, June, 1917, which cannot be separated. This species extends down the coast to California and across the continent to Labrador and the Great Lakes.

Gyrinus opacus Sahlb. Ins. Fenn. (1817), IV, p. 45.

A number of specimens were taken at Pigeon Cove, near Mount Pavlof, by M. A. Kusche, which have been determined by Fall[7] as the above. Fall also gives the range as northern Ontario, Manitoba, Alberta, and Labrador, and in Europe, according to Sharp and Fall, "arctic Norway and Lapland southwards to the Highlands of Scotland," also "in Iceland and Greenland."

FAMILY HYDROPHILIDÆ

Cercyon fulvipennis Mann. Bull. Mosc. XXV (1852), p. 343.

A small series from Kodiak, Sept., 1917. This is a fairly abundant insect throughout southeastern Alaska and it extends as far south as California.

FAMILY SILPHIDÆ

Silpha lapponica Hbst. Natursystem V (1793), p. 269.

Several specimens from Brooks Falls, July, 1919. Many others were taken at the same place by Mr. Basinger. This is a very common carrion beetle in the boreal parts of North America and extends from the Seward Peninsula to Labrador and the Great Lakes and along the Pacific coast to Lower California. It is found also in arctic Europe and Siberia.

Choleva egena Horn. Trans. Am. Ent. Soc. VIII (1880), p. 257.

Several specimens from Katmai, July, 1917. This species is generally distributed throughout southeastern Alaska.

Choleva luridipennis Mann. Bull. Mosc. XXVI (1853), p. 176.

One specimen from Katmai, June, 1917. I have also another from Koggiung on Bristol Bay. This is also reported from the Kenai Peninsula and extends across the continent to Labrador and New England and southward along the Pacific coast to Oregon.

FAMILY STAPHYLINIDÆ

Olisthaerus megacephalus Zett. Fauna Insect. Lapp. (1828), p. 56.

One specimen from Anchorage, June 6, 1917. Mr. Basinger also submitted another taken at Savonoski, Aug., 1919. This species has been reported from the Kenai Peninsula, California, Canada, and the Lake Superior region, as well as from northern Europe and Siberia.

Megarthrus atratus Mäkl. Bull. Mosc. XXV (1852), p. 325.

One specimen from Kodiak, Sept., 1917. This species was described from Sitka and I have taken it in numbers on Unalaska Island.

Anthobium pothos Mann. Bull. Mosc. XVI (1843), p. 235.

A number of specimens from Katmai, July, 1917. This species ranges down the coast to British Columbia and across the continent to Newfoundland and the Northeastern States.

[7] Trans. Am. Ent. Soc. XLVII (1922), p. 301.

Omalium longulum Mäkl. Bull. Mosc. XXV (1852), p. 323.

A large series of specimens from Savonoski, Aug. 2, 1919. It is apparently a common species in this region, though it is lacking in most collections. It was described as from Sitka.

Omalium (*Phloenomus*) *lapponicus* Zett. Ins. Lapp. (1840), p. 73.

One specimen from Savonoski, Aug. 2, 1919. This species extends across the continent to Newfoundland and Labrador, the Great Lakes, and through the Rocky Mountains to Colorado. It is also found in arctic Europe and Siberia. On the Pacific coast, it does not seem to have been found south of Alaska.

Microedus austianus Lec. Proc. Bost. Soc. Nat. Hist. XVI (1874), p. 273.

Several specimens from Kodiak, Sept. 21, 1919, and Savonoski, July and Aug., 1919. I have also found this species on Unalaska Island as well as on Mount Rainier, Wash., and the high middle and southern Sierras of California. It extends across the continent to Newfoundland.

Amphichroum (*Pelecomalium*) *testaceum* Mann. Bull. Mosc. XVI (1843), p. 234.

One specimen from Yakutat, May 31, 1919. This is a common species in southeastern Alaska and ranges south along the coast to northern California.

Geodromicus rufipennis n. sp.

Elongate, depressed; rufocastaneous, legs paler, the abdomen in great part piceous, the pronotum and apical margins of elytra dusky; pubescence fine and sparse. Head slightly narrower than prothorax; the eyes large and very convex; tempora moderately developed and well rounded, much less prominent than eyes; the impression on the vertex large, deep, quadrangular, and with abrupt sides, the epistomal sulcus well marked and connected with the preceding; last joint of maxillary palpi much narrower but of about equal length with third; the antennæ almost reaching apex of elytra, the joints from 2-10 gradually broader and more abconical, the tenth slightly more than twice as long as broad, the eleventh about twice as long as the tenth. Prothorax slightly wider than long, with sides evenly rounded in front, convergent posteriorly and sinuate in front of hind angles, hind angles right angled; base truncate, one-fourth wider than apex; disc widest in front of middle, sparsely, finely punctured, median longitudinal line rather finely, deeply impressed and with a deep transverse pit in front of the scutellum. Elytra about as long as head and prothorax together, longer than broad, slightly wider at base than pronotum, with sides gradually divergent, then well rounded to the truncate apex; disc rather coarsely and moderately closely punctured. Beneath rather finely, not closely punctured and somewhat scabrous. Length 5 mm., breadth 1.75 mm.

Type, a unique presented to me by Mr. Basinger who secured it at Brooks Falls, Naknek Lake, Alaska Peninsula, July 8, 1919.

This species belongs with *G. strictus* Fl. and other species having a sulcate pronotum, but is readily separable from all by its color, the reddish elytra making it quite conspicuous.

Oxytelus lagueatus Marsham. Entom. Brit. (1802), p. 513.

O. fuscipennis Mann., Bull. Mosc. XVI (1843), p. 233.

Numerous specimens from Kodiak, Sept., 1917; Valdez, June 4, 1919; Excursion Inlet, May 31, 1919; and Yakutat, May 31, 1919. This is a common insect in southeastern Alaska and is widely distributed throughout North America. It is also common in Europe and Siberia.

Stenus juno Fab. Syst. Eleuth. (1801), p. 602.

One specimen from Kodiak, June, 1917. This species is also found on Unalaska Island, along the coast to Washington, across the continent to Newfoundland, and down the entire Atlantic coast. It occurs as well in northern Europe and Siberia.

Stenus insularis Casey. Stenini of North Am., Phil. (1884), p. 50.

One specimen from Kodiak, June, 1917. It has been previously reported from Virgin Bay, Yakutat, and Seldovia, Alaska, by E. A. Schwarz (Coleoptera of Harriman Alaska Expedition, 1900). It was originally described from Vancouver and later found both in Oregon and at Lake Tahoe, Cal.

Stenus fraternus Casey. Stenini of North Am., Phil. (1884), p. 155.

S. umbratilis Casey, Stenini of North Am., Phil. (1884), p. 156.

One specimen from Savonoski, July 14, 1919. This was reported by E. A. Schwarz (Coleoptera of Harriman Alaska Expedition, 1900), from Metlakatla, Alaska, and originally described from British Columbia. It also occurs in Wyoming.

Stenus plicipennis Casey. Stenini of North Am., Phil. (1884), p. 162.

One specimen from Brooks Falls, July, 1919. It has not previously been reported from Alaska, though it was described from British Columbia.

Baptolinus macrocephalus Nord. Symbolæ ad Mon. Staph. (Comm. Acad. Petersb.) IV (1837), p. 124.

Five specimens from Point Graham, June 5, 1919, and Yakutat, May 31, 1919. This insect has been found in a number of places in southeastern Alaska and ranges south as far as Mount Rainier, Wash., and across the continent to Newfoundland and New Hampshire.

Philonthus siegwaldi Mann. Bull. Mosc. XVI (1843), p. 230.

Several specimens from Kodiak, Sept., 1917, and one from Katmai, June 10, 1919. This species occurs throughout southeastern Alaska and extends as far south as northern California.

Quedius lævigatus Gyll. Ins. Suec. II (1828), p. 306.

Three specimens, one each from Anchorage, June 6, 1917, Kodiak, June, 1917, and Savonoski, June, 1919. This rove beetle extends down the coast to California and Nevada, ranges throughout the Rocky Mountains and across

the continent, where it is found generally distributed in the region east of the Rocky Mountains. It also occurs in northern Europe and Siberia.

Quedius capucinus Grav. Monogr. Col. Micropt. (1806), p. 40. var. *pediculus* Nordm.

Symbolæ ad Mon. Staph. (Comm. Acad. Petersb. IV), (1837), p. 79.

One specimen of the variety *pediculus* from Katmai, Aug., 1917. It is found abundantly on Unalaska Island and generally throughout southeastern Alaska. The typical form has a wide distribution in North America.

Tachinus parallelus Horn. Trans. Am. Ent. Soc. VI (1877), p. 98.

Three specimens from Kodiak, July, 1917. I have taken it also on Unalaska Island and Mount Rainier, Wash., and have an example from Seward on the Kenai Peninsula. It was originally listed from Illinois and Canada.

Tachinus instabilis Mäkl. Bull. Mosc. XXVI (1853), p. 185.

Several specimens from Kodiak, Sept., 1917, and Yakutat, May 31, 1919. This species occurs along the Pacific coast generally from Alaska to California.

Mycetoporus humidus Say. Descr. New N. Am. Ins., etc., New Harmony (1834), p. 65.

One specimen from Brooks Falls, July, 1919. I have taken it also at Banff, Alberta, and it is known to occur in California, Michigan, and Florida.

Gymnusa brevicollis Payk. Fauna Suec. III (1800), p. 398.

Four specimens from Savonoski and Brooks Falls, June and July, 1919. This species extends to Lake Superior and eastern Canada and also occurs in northern Europe and Siberia.

Atheta graminicola Grav. Monogr. Col. Micropt. (1806), p. 176.

A number of specimens from Kodiak, Sept., 1917, and Toms Village, July, 1919. This species is exceedingly common in Unalaska, on the west slopes below the ice fields. It ranges from Alaska south to California, across the continent to Newfoundland, and occurs also in northern Europe and Siberia.

Atheta comparabilis Mäkl. Bull. Mosc. XXVI (1853), p. 181.

A number of specimens from Katmai, June, 1917, Savonoski, July, 1919, and Brooks Falls, July, 1919. It has also been reported from Kodiak.

Atheta (*Metaxya*) *lævicollis* Mäkl. Bull. Mosc. XXV (1852), p. 306.

Four specimens from Savonoski, June, 1919. This species was described as from Sitka and has been reported also from Washington.

Atheta (*Dimetrota*) *subrugosa* Kies. Stett. Ent. Zeitung, IX (1848), p. 318.

Two specimens from Savonoski, Aug., 1919. This occurs also in British Columbia and various parts of Europe.

Parocalea baicalensis Sols. Hor. Ross. XI (1875), p. 268.

One specimen from Savonoski, June, 1919. This is listed from Siberia as well as from North America.

Ocalea

One specimen from Savonoski, June, 1919, which cannot be placed beyond the genus.

FAMILY SPHÆRITIDÆ

Sphærites glabratus Fab. Entom. Syst. I (1792), p. 73.

One specimen from Yakutat, May 31, 1919. This peculiar insect is to be found generally throughout southeastern Alaska and extending as far south as Washington. It occurs also in northern Europe.

For many years it has been placed among the Silphidæ, but Ganglbauer found through a study of the wing structures and other characters that it was definitely not a Silphid, but belonged nearer the Histeridæ.

FAMILY COCCINELLIDÆ

Anisosticta bitriangularis Say. App. Vol. II Long Exp. (1824), p. 269.

A. strigata, auct. nec Thunb.

One specimen, a very dark phase with the light color much reduced, from Anchorage, June 6, 1917. This species is generally distributed throughout the more boreal parts of North America as well as northern Europe.

Hippodamia 13-punctata Linn. Syst. Nat. Ed. X (1758), p. 366.

Two specimens from Anchorage, June, 1917, and two from Savonoski, Aug., 1919. This species extends down the coast as far as Washington and across the continent, being common in the entire territory east of the Rocky Mountains. It also occurs in Europe and Siberia.

Coccinella transversoguttata Fald. Mem. Ac. Petr. II (1835), p. 454.

Two specimens from Anchorage, June 6, 1917. This is a common species throughout the more northern parts of North America. It is also found in Siberia.

Coccinella monticola Muls. Mém. Ac. Sc. Lyon. (2) I (1851), p. 115.

Several specimens from Brooks Falls, July, 1919, all collected by Mr. Basinger. These are generally smaller than those found in the Cascade and Sierra Nevada Mountains and with the elytral blotches narrower and more transverse. The species extends across the continent to the Great Lakes and New Hampshire and down the Rocky Mountains, as well as the Cascades and Sierra Nevadas. If this is the same as *C. nivicola* Muls., which Crotch states is the case, it is found also in Siberia.

FAMILY CRYPTOPHAGIDÆ

Atomaria (*Agathengis*) *vespertina* Mäkl. Bull. Mosc. XXVI (1853) p. 210.

One specimen from Savonoski, July 10, 1919. It was described as from the Kenai Peninsula.

Atomaria kamtschatka Mots. Bull. Mosc. XVIII (1845), p. 362.

One specimen from Katmai, June 10, 1919. This species has also been reported from Kodiak as well as from Kamchatka and eastern Siberia.

FAMILY NITIDULIDÆ

Epuræa ambigua Mann. Bull. Mosc. XVI (1843), p. 256.

One specimen from Katmai, June, 1917. This species occurs along the Pacific coast from Alaska to California.

Epuræa linearis Mäkl. Bull. Mosc. XXVI (1853), p. 205.

One specimen from Lake Brooks, June, 1919 and a second from Savonoski, captured by Mr. Basinger. The species ranges from Alaska to British Columbia.

Rhizophagus scalpturatus Mann. Bull. Mosc. XXV (1852), p. 362.

One specimen from Savonoski, June, 1919. This is a common insect in southeastern Alaska, and it ranges south along the coast to Washington, through the Cascades and Sierra Nevada Mountains to Nevada, the Rocky Mountains to Colorado, and across the continent to New York.

FAMILY BYRRHIDÆ

Simplocaria metallica Sturm. Deutsch. Fauna V (1805), p. 111.

A small series from Brooks Falls, July, 1919. This species is generally distributed throughout the boreal parts of America and is also found in the Rocky Mountains as well as in northern Europe and Siberia.

FAMILY DASCYLLIDÆ

Cyphon variabilis Thunb. Mus. Nat. Scad. Upsal. (1785), p. 54.

A small series, one from Anchorage, June 6, 1917, the remainder from Brooks Falls, July, 1919. This is a common insect, found throughout most of North America as well as in northern Europe and Siberia.

FAMILY ELATERIDÆ

Athous rufiventris Esch. Entomographien (1822), p. 71.

A. ferruginosus Esch., Thon. Entom. Archiv. II (1829), p. 33.

A small series from Katmai, July, 1917. These specimens are of the phase commonly called *ferruginosus,* which is widely distributed along the west coast, extending from Alaska to middle California. The typical *rufiventris,* of which I have specimens from the type locality, was described from Unalaska, and differs from the typical *ferruginosus* only slightly in color, less, in fact, than many specimens normally found with it. I therefore feel that they should be combined. The species as a whole is a very variable one, ranging in color from castaneous, through ferruginous, to black, and it also varies much in size and somewhat in sculpturing, especially the females.

Athous triundulatus Mann. Bull. Mosc. XXVI (1853), p. 222.

There is in the collection one specimen from Savonoski, July, 1919, which I am listing as a variety of this species. According to the original description, the pronotum is black, with a reddish vitta extending from the base to apex, and the elytra ferrocastaneous with three transverse undulate denuded fasciæ.

The specimen before me, probably the only specimen known outside of the type, has the prothorax entirely black and the elytra with the anterior and middle fasciæ well marked, but with the posterior extended so as to take in the entire apical area.

Ludius (*Corymbites*) *umbricola* Esch. Thon. Entom. Archiv. II (1829), p. 34.

One specimen from Excursion Inlet, May 31, 1919. This is a fairly common insect of southeastern Alaska. It is usually placed as a subspecies of *L. volitans* Esch., but seems sufficiently differentiated structurally to be entitled to rank as a good species.

Ludius (*Corymbites*) *lobatus* Esch. Entomographien (1822), p. 69; Thon. Ent. Archiv. II (1829), p. 34; Mann., Bull. Mosc. XVI (1843), p. 243.

L. caricinus Germ., Zeitz. fur. Ent. IV (1843), p. 63.
L. mœrens Lec., Proc. Acad. Nat. Sci. Phil. (1866), p. 392.

Several specimens with representatives of two color phases, one all black, the other with castaneous elytra. Both phases were taken at Katmai, June 10, 1919, and at Kodiak, June, 1917. It is thus a dichromatic species in that part of Alaska, as it is in several other parts of its area of distribution, but in most places it is dark and unicolorous. It is also very variable as to size and structure. The larger, more robust, and convex, is the typical *lobatus* from Unalaska. The phase *caricinus* from Sitka and other parts of southeastern Alaska is fairly robust but flatter, while farther south the species becomes flat and quite elongate, the variety *moerens* Lec. It also ranges across the country through Canada to the Great Lakes, Maine and the mountains of New York. The eastern specimens are as a rule much smaller than the western and show a tendency to be dichromatic.

There has always been a great deal of confusion with regard to the proper name. *Lobatus* was definitely described by Eschscholtz from Unalaska, in 1822, in his Entomographien. The insect is again referred to in Thon's Archives and again by Mannerheim in the Bull. Mosc. in 1843. The species is the only member of the genus found on Unalaska, *L. umbricola* Esch. being listed in error from there, and was found by myself to be fairly common in the lowlands. The *caricinus* of Germar from Sitka is simply a slightly more flattened phase of the same. How it was ever given preference over *lobatus,* I cannot understand. I have a very large series of specimens in my collection and from most parts of its area of distribution, and these show that though polymorphic and polychromatic, it is but one species, for all gradations are present. The *L.* (*C*) *moerens* Lec., as shown by careful examination of the type from Oregon, is but the more elongate or extreme phase of the species.

Ludius (*Corymbites*) *sagitticollis* Esch. Thon. Ent. Archiv. II (1829), p. 34.

One specimen from Excursion Inlet, May 31, 1919. This species is a characteristic one of southeastern Alaska and extends south into British Columbia and through the Cascades and Sierra Nevada Mountains to Lake Tahoe, Cal.

Ludius (*Paranomus*) *costalis* Payk. Fauna Suec. III (1800), p. 37.

One specimen from Katmai, June, 1917, and two from Brooks Falls, July, 1919. The species ranges as far south as Mount Rainier, Wash., and across the continent to the Great Lakes, New Hampshire, and Labrador. It is also found in northern Europe and Siberia.

Cryptohypnus littoralis Esch. Thon. Ent. Archiv. II (1829), p. 33; Mann., Bull. Mosc. XIX (1846), II, p. 510.

One specimen from Kodiak, June, 1917. This most interesting seashore elaterid is also found on the Pribilof and most of the Aleutian Islands and ranges along the Alaskan coast as far south as Sitka.

Cryptohypnus nocturnus Esch. Thon. Ent. Archiv. (1829), p. 33.

C. bicolor Esch., Thon. Ent. Archiv. (1829), p. 33.
C. lucidulus Mann., Bull. Mosc. XXVI (1853), p. 227.

Two specimens of the variety *bicolor* were collected at Brooks Falls, July, 1919, one by Mr. Basinger. One specimen of the variety *lucidulus* was taken at Savonoski, Aug. 1919. The larger and unicolorous *nocturnus* is a rather characteristic stream-side species of the lowlands from Alaska to San Francisco. Specimens from Lake Tahoe, Cal., also seem to be of this phase. The variety *lucidulus* is generally smaller and with lighter margins. It seems to be restricted to Alaska and the high Cascades of British Columbia and Washington. The variety *bicolor,* also smaller, more pilose and with elytra somewhat castaneous, is the commonest and most widely distributed phase. It is found on Atka, Unalaska, and Akutan Islands of the Aleutian group, and ranges from the Seward Peninsula across the continent to Labrador and the Great Lakes, the mountains of New York and New Hampshire, through the high Rocky Mountains to Colorado and the Cascades and Sierra Nevada Mountains to Mount Whitney.

Hypnoidus restrictulus Mann. Bull. Mosc. XXVI (1853), p. 228.

Four specimens from Brooks Falls. This is also recorded from the Kenai Peninsula and extends across the continent to the White Mountains of New Hampshire and the Great Lakes.

Elater nigrinus Hbst. Fuess. Arch. d. Insect. II (1784), p. 114; Payk., Fauna Suec. III (1800), p. 39.

One specimen from Brooks Falls, July, 1919. This is a common species along the Pacific coast. It extends along the coast from Alaska to middle California, through the Cascades and Sierra Nevada Mountains to below Lake Tahoe and across the continent to Labrador, Connecticut, and the Great Lakes. It is also found in northern Europe and Siberia.

FAMILY BUPRESTIDÆ

Melanophila acuminata DeG. Mém. pour servir l'hist. Insect. IV (1774, p. 133.

Two specimens from Savonoski, Aug. 5, 1919. This is a common species in the coniferous forest of North America, extending clear across the conti-

nent and then southwards along the mountain chains. It also occurs in northern Europe and Siberia.

FAMILY CANTHARIDÆ (LAMPYRIDÆ)

Eros simplicipes Mann. Bull. Mosc. XVI (1843), p. 245.

One specimen from Yakutat, May 31, 1919. This species is fairly common throughout southeastern Alaska and extends down the coast as far as San Francisco, Calif.

Podabrus piniphilus Esch. Bull. Mosc. II (1830), p. 65.

Many specimens from Savonoski, Brooks Falls, Katmai, and Cordova. This is a very abundant species in southeastern Alaska and it ranges south to Oregon and inland to the Great Lakes.

FAMILY TENEBRIONIDÆ

Upis ceramboides Linn. Syst. Naturæ. Ed. 10 (1758), p. 388.

Two specimens from Anchorage, June, 1917. This species is generally distributed throughout the forested area of the interior of Alaska and the more boreal parts of Canada, extending as far south as the Great Lakes. It is also found in northern Europe and in Siberia.

FAMILY MELANDRYIDÆ

Zilora

One specimen in rather poor condition, taken at Anchorage, June 6, 1917. This species is most decidedly not *Zilora hispida* Lec., a species which is found in Oregon and the Sierras of California, as well as in eastern Canada and the States bordering thereon. It might possibly be one of the other species described, but that cannot be told until more specimens are secured.

FAMILY PYTHIDÆ

Rhinosimus viridiæneus Rand. Descr. new Col. Maine (1838), p. 23.

One specimen from Snug Harbor. This insect occurs as far south as San Francisco and ranges across the continent to Maine.

FAMILY CERAMBYCIDÆ

Tetropium cinnamopterum Kirby. Rich. Fauna Bor.Amer. IV (1837), p. 174.

Two specimens from Savonoski, July, 1919. This is a common species in the interior of the more northern part of the continent. It is found from the northern limits of trees in Alaska to Labrador, Maine, and the Great Lakes.

Opsimus quadrilineatus Mann. Bull. Mosc. XVI (1843), p. 305.

One specimen from Kodiak, June, 1917. This species ranges throughout southeastern Alaska and down the coast as far as San Francisco. In the north it breeds in the true spruces, but farther south it lives on the Douglas fir.

Leptalia macilenta Mann. Bull. Mosc. XXVI (1853), p. 253. var. *frankenhauseri* Mann. Op. cit. p. 252.

Several specimens of the typical piceous and unicolorous phase and several of the striped variety *frankenhauseri,* all from Katmai, July, 1917. This species extends down the Pacific coast to below San Francisco, the dark phase barely across the line into California, the var. *frankenhauseri* only into Washington. About San Francisco, the common phase is the var. *fuscicollis* Lec.

Acemæops pratensis Laicharteg. Verz. u. Beschr. Tyroler Ins. (1784), p. 172.

One specimen from Savonoski, July, 1919. This species ranges from Alaska to the Lake Superior region and Newfoundland, and extends down the Rocky Mountains to New Mexico and along the Cascade and Sierra Nevada Mountains to Mount Whitney. It is also found in Europe and Siberia.

Leptura sexmaculata Linn. Syst. Nat. Ed. 10 (1758), p. 398.

Five specimens from Brooks Falls and Savonoski, July and Aug., 1919. This insect ranges throughout the more boreal parts of our continent, extending south along the Pacific coast to Washington and in the east to the Great Lakes. It is also found in northern Europe and Siberia.

Plectrura spinicauda Mann. Bull. Mosc. XXV (1852), p. 366.

One specimen from Glacier Bay, June, 1919. This peculiar wingless cerambycid ranges down the coast from southeastern Alaska to about as far as middle Oregon.

FAMILY CHRYSOMELIDÆ

Donacia hirticollis Kirby. Rich. Fauna Bor. Amer. IV (1827), p. 226.

One specimen collected at Brooks Falls, July 8, 1919, by Mr. Basinger. I also have specimens from Seward on the Kenai Peninsula and from Vancouver Island. It extends across the continent to the Great Lakes.

Donacia flavipes Kirby. Rich. Fauna Bor. Amer. IV (1837), p. 223.

Several specimens from Katmai, July 8, 1917. This is the first record, I believe, from Alaska. I have taken it at Banff, Alberta, and it is known from the territory east of there, as well as from Michigan, Pennsylvania, and Indiana.

Phytodecta (*Gonioctena*) *pallida* Linn. Syst. Natur. 10 (1758), p. 370.

One specimen from Anchorage, June 6, 1917. This boreal species has a distribution extending from the Seward Peninsula to Labrador, the Great Lakes, and to Alberta. It is also found in northern Europe and Siberia.

FAMILY CURCULIONIDÆ

Trichalophus seriatus Mann. Bull. Mosc. XXVI (1853), p. 245.

One specimen from Kodiak, June, 1917. This species is also recorded from the Kenai Peninsula.

Lophalophus inguinatus Mann. Bull. Mosc. XXVI (1853), p. 351.

One specimen from Katmai, July, 1917. It is abundant on the Aleutian Islands, especially Unalaska, and found also on Kodiak, Afognak, the Kenai Peninsula, and as far south as Sitka.

Paraplinthus carinatus Boh. Sch. Gen. Curc. V. 2 (1840), p. 334.

Two specimens, one from Kodiak, June, 1917, and one from Excursion Inlet, May 31, 1919. This species is found throughout southeastern Alaska and ranges south along the coast as far as Santa Cruz County, Cal.

Dorytomus rufulus Mann. Bull. Mosc. XXVI (1853), p. 240.

Several specimens from Katmai, June, 1917. I have taken this also on Unalaska Island and it is known from the Kenai Peninsula.

Notaris æthiops Fab. Ent. Syst. I (1792), p. 405.

Two specimens taken by Mr. Basinger at Brooks Falls, July 8, 1919. I have taken it at Banff, Alberta, and it is reported from Vancouver. It is generally distributed throughout the interior of Alaska and Hudson Bay region, extending to Labrador, Newfoundland, New Hampshire, the Great Lakes, and down the Rocky Mountains to Colorado. It also occurs in northern Europe and Siberia.

FAMILY SCOLYTIDÆ

Polygraphus rufipennis Kirby. Rich. Fauna Bor. Amer. IV (1837), p. 193.

Many specimens from Savonoski, various dates. This is one of the commonest of the Scolytidæ of boreal America. It ranges from Alaska to Newfoundland and the Great Lakes.

Dendroctonus johanseni Swaine. Rpt. Canad. Arctic Exped. Vol. III, Insects (1919), p. 5 E.

A small number of specimens which were taken from a dying spruce tree, *Picea canadensis* Mill., by Professor Hine and Mr. Basinger near Savonoski, Aug. 13, 1919. Some of these were sent to Dr. Swaine, who carefully compared them with his type material from the Coppermine River, Northwest Territories, Canada, and pronounced them absolutely the same. This is, therefore, an interesting record, for in both localities the beetles were found near the extreme limit of the distribution of the spruces.

Dendroctonus obesus Mann. Bull. Mosc. XVI (1843), p. 296.

Two specimens from Anchorage, June 6, 1917. This species is restricted to the Sitka spruce and is found with it along the coast as far south as Humboldt County, Cal.

Dendroctonus borealis Hopkins. Bull. 17, pt. 1, Tech. Ser. Bur. Ent., U. S. Dept. Agr. (1907), p. 123.

A small series of specimens taken by Professor Hine and Mr. Basinger at the same locality as for *D. johanseni* Swaine, Savonoski, July, 1919. Among the number are fully pigmented black individuals as well as immature ones with rufous elytra. This species is generally distributed in the interior of

Alaska and northwestern parts of Canada. It is very close to *D. obesus* Mann. and is no doubt derived from the same common stock.

Hylurgops rugipennis Mann. Bull. Mosc. XVI (1843), p. 297.

One specimen from Excursion Inlet, May 31, 1919. This insect ranges throughout southeastern Alaska and down the coast to middle California. It is found on a number of coniferous trees, the pines as well as the spruces.

Trypodendron cavifrons Mann. Bull. Mosc. XVI (1843), p. 297.

One specimen from Savonoski, July, 1919. This is a moderately common ambrosia beetle on the Pacific coast and is generally to be found on the true and Douglas firs.

Pityophthorus nitidulus Mann. Bull. Mosc. XVI (1843), p. 298.

One specimen from Kodiak, June, 1917. This is found generally throughout southeastern Alaska and as far south as southern British Columbia.

Ips interruptus Mann. Bull. Mosc. XXV (1852) p. 357.

One specimen from Anchorage, June, 1917. This species is common in the interior of Alaska and the Hudson Bay region.

Dryocœtes septentrionis Mann. Bull. Mosc. XVI (1843), p. 298.

Three specimens from Savonoski, Aug., 1919, two collected by Professor Hine and one by Mr. Basinger. I have also specimens from Seward on the Kenai Peninsula and it is known to be generally distributed along the coast to southern British Columbia.

Dryocœtes affaber Mann. Bull. Mosc. XXV (1852), p. 339.

Numerous specimens from Savonoski, July, 1919, taken by both Professor Hine and Mr. Basinger. This species extends down the coast at least as far as Oregon.

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